

**REMARKS/ARGUMENTS**

Claims 1-10 are pending in the application, claims 1 and 2 are withdrawn from consideration and claims 3-10 stand withdrawn and stand rejected. In response, claims 1 and 2 have been canceled, claims 3, 6, 7, 8 and 10 have been amended, and the specification has been amended. No new matter has been added through this amendment. Entry of this amendment is hereby requested.

**With Respect to the Title, Page 2, Paragraph 5, of the Office Action:**

The United States Patent and Trademark Office has required that the title be amended to be reflective of the subject matter of the claims. In response, the title has been amended as suggested in the Office Action. Therefore, withdrawal of this objection is requested.

**With Respect to the Specification Informalities, Pages 2-3, Paragraph 6, of the Office Action:**

The United States Patent and Trademark Office indicated that certain trademarks in the specification are not capitalized. With respect to the mark "QIAGEN® Rneasy" (given as "Qiagen Rneasy" in the specification), the two occurrences in the specification have been capitalized and the registration symbol placed next to it. With respect to the mark "Biospec," this word is not being used as a trademark, but as a company name in the specification and therefore has not been capitalized.

**With Respect to the Double Patenting Rejection, Pages 3-4, Paragraphs 7-9, of the Office Action:**

Claims 3-10 stand rejected under the judicially created doctrine of obviousness type double patenting over claims 1-8 of United States Patent 6,254,863 B1 and claims 1-4 of United States 6,585,977. Terminal Disclaimers executed by the representative of the Applicant are provided with this response in order to obviate this rejection. Withdrawal of this rejection is hereby requested.

**With Respect to the Rejections Under 35 U.S.C. § 112, First Paragraph, Pages 4-5, Paragraph 10, of the Office Action:**

Claims 2-10 stand rejected under 35 U.S.C. § 112, first paragraph, for the reasons indicated on pages 4-5, paragraph 10, of the Office Action. The Applicant notes that the *recA* mutant of *Porphyromonas gingivalis*, which is deposited at ATCC under accession number 202109, has already been made available to the public as indicated in the present Office Action

in connection with the parent application, in order for the parent application to issue.

Withdrawal of this rejection is hereby requested.

**With Respect to the Rejection Under 35 U.S.C. § 112, First Paragraph, Pages 5-7,  
Paragraph 11, of the Office Action:**

Claims 3-10 stand rejected under 35 U.S.C. § 112, first paragraph, for the reasons indicated on pages 5-7, paragraph 11, of the Office Action. In response, claim 3 has been amended to incorporate the limitation of claim 1 and claim 1 has been canceled. With respect to claim 3, the Applicant notes that claim 3 does not claim that “the method [comprises] administering to the mammal at least one dose of the mutant of *recA* defective mutant of *Porphyromonas gingivalis*,” but instead claims that “the method [comprises] administering to the mammal at least one dose of the mutant of a NON-VIRULENT, *recA* defective mutant of *Porphyromonas gingivalis*.” (emphasis added) It is not merely that the bacteria is *recA* defective, but that it is also “non-virulent” that is critical to the present invention.

The Applicant believes that the teaching in the present disclosure is sufficient to teach one of ordinary skill in the art to select any non-virulent, *recA* deficient mutant of *Porphyromonas gingivalis* for use in the claimed invention and that not to allow claim 3 as presently written would be to impermissibly limit the invention to a preferred embodiment. The Applicant has provided detailed instructions to one of ordinary skill in the art to create a useful mutant for the presently claim invention, but is not required to teach how to create all possible such mutants as indicated in the Office Action.

In light of this, the Applicant requests reconsideration of the rejection of claims 3-10 under 35 U.S.C. § 112, first paragraph.

**With Respect to the Rejections Under 35 U.S.C. § 112, Second Paragraph, Page 8,  
Paragraphs 12-13, of the Office Action:**

Claims 3-10 stand rejected under 35 U.S.C. § 112, second paragraph for the reasons indicated on page 8, paragraph 13 of the Office Action. In response, claims 1 and 2 have been canceled and claims 3, 6, 7 and 8 have been amended to obviate these rejections. Withdrawal of these rejections is hereby requested.

### CONCLUSION

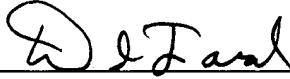
Claims 3-10 are pending in the present application and are believed to be in condition for allowance. Therefore, a Notice of Allowance is earnestly solicited. If, however, there remain any issues which can be addressed by telephone with the Applicant's undersigned representative, the Examiner is encouraged to contact the undersigned.

The Commissioner is hereby authorized to charge payment of any fees associated with this communication, including all Terminal Disclaimer fees and requests for extensions of time to respond to this Office Action, to Deposit Account No. 19-2090.

Respectfully submitted,

SHELDON & MAK PC  
A Professional Corporation

Date: December 8, 2004

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**Date:** November 7, 2003

**To:** David Farah, Esq.  
Sheldon & Mak

**From:** ATCC Patent Depository

**Reference:** "Non-Virulent *Porphyromonas Gingivalis* Mutant  
ATCC No. 202109  
U.S. Patent No.: 6,585,977 B1

In accordance with instructions contained in your letter of October 8, 2003, all restrictions on the distribution of ATCC No. 202109 were removed as of October 14, 2003. If you need further assistance please contact me. Thank you.



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